**Standardizing Sediment Risk Characterization on the Basis of Urban Intensity of the Watershed**

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Sediment risk assessments have not done a good job of distinguishing between the ecological risk posed by contaminants originating at a hazardous waste site versus that from overall impacts of urbanization. Remedy effectiveness depends on accurate attribution of risk to sources that can be targeted for clean up. If urban intensity of the watershed is not a consideration, but contributes significantly to the cumulative risk that results in a clean up, then no measurable improvement may result unless impacts of urbanization are also lessened as part of the remedy.

The U.S. Environmental Protection Agency (U.S. EPA) Region I and the U.S. Geological Survey used a stressor–response model to effectively standardize sediment risks at sites by correcting for urban intensity of the watershed. If the aquatic life risk appeared greater than expected on the basis of the watershed's urban intensity, the indication was that effects on the aquatic community were greater than could be attributed to urbanization alone. If this was the case, the deviation of the aquatic community data from the expected measure could be used to estimate contaminant-only effects on the system and support the risk characterization of sediment chemical and toxicological data. Furthermore, this information may be used to identify defensible target cleanup values protective of the environment, with the prospect of achieving remedy effectiveness if implemented through remedial action planning.